Broderip concludes his volume. How happy are we that we live in days when these monsters are doomed to lie petrified in oolitic rocks or extended, carved curiously "by art and man's device," out of the solid stone, and gazed at, in and through glass cases, in the National Museum! The work of Mr. Broderip is very readable, and it would prove instructive to many a scientific man, as well as amuse his leisure hour. We have no doubt that this work will "cherish," as well as "awaken, a love for natural history."—A.W.

An Experimental Inquiry into the Cause of the Ascent and Descent of the Sap, &c. By G. Rainey, M.R.C.S.E.

Whatever may be the value of these inquiries, it is certain that they have led the author to some conclusions which will appear rather curious to most botanical anatomists. For instance, he endeavours to show that the crude sap ascends in the substance of the cell-walls and intercellular matter without passing through the cavities of the cells or vessels, and his reasons are founded upon the experiment of causing plants to imbibe certain solutions and then decomposing these in sections placed beneath the microscope, when the solid walls alone exhibit the coloured product (!). If we were to strain a solution of bichloride of mercury through a piece of gauze, and then to decompose this by hydrosulphate of ammonia and to examine the gauze by a magnifier, it is probable that we should find the *substance* alone coloured, but we should hardly deduce from this that no bichloride of mercury had passed through the interstices.

The author's way of accounting for the formation of vessels is equally original; he shows that "the wall of a vessel is formed by the union of the external thickened wall of the surrounding cells."

The various experiments and details respecting the movement of the sap and the growth of plants offer nothing of value which is not already well known.

In these days it is absolutely necessary that students of a science should make themselves *clearly* acquainted with the results of the labours of their predecessors: had the author of the present little volume done so, he would have saved much valuable time and application.—A. H.

MISCELLANEOUS.

Extracts from a Letter to Thomas Bell, Esq., F.R.S., *from* George Clark, Esq., *of Mauritius.*

Port Louis, June 5th, 1847.

* * * "I venture to lay before you the following description of some bullocks, brought hither from the island of Lombach, near Java. One cargo only has been imported, and it does not appear likely that any more will be brought. Their characteristics are so novel to me that I determined to describe them to you.

"Their heads are lighter and more deer-like than any of the Ox tribe I have before seen, with the eye remarkably full and lively, but still gentle. The callosity on the muzzle is narrower than that of ordinary cattle, and extends farther upwards towards the forehead. The horns are of moderate size and prettily curved, and furrowed longitudinally as well as transversely at the base, giving almost the appearance of the butt of those of the stag. These oxen are of middling size, but have an amazing depth of chest, and considerable width between the fore-legs: very little dew-lap; no hump; but the spinous processes on the side of the hump so elongated as to give the idea of a hump having been dissected off. Legs remarkably clean and of moderate length, and so formed as to indicate great strength and activity. Buttocks full and square behind. Tail remarkably fine and tapering to a sharp point, with a moderate tuft of hair. An oval mark of a yellowish white colour begins at the root of the tail and descends nearly to the hocks, including both buttocks; the length of this mark is to its breadth as 5 to 3. The skin extremely fine and soft, with a coat like that of a race-horse. Colour varying, but very few pied and none quite black; a light bay predominating, in some individuals beautifully marked with small white spots. These characters belong to the whole cargo, about ninety in number, and are not therefore to be considered as individual peculiarities.

"The animals were all very gentle, and their appearance, from the form and lightness of the head and the lively mildness of the eye, was superior in beauty to that of any lot of cattle I ever saw.

"The captain who brought them informs me that the natives would not part with their cows, and every one of these of which I speak was castrated. Having been put in a cold shed after landing, many of them got ill, and some died; and as we have suffered terribly from a murrain which visited our cattle two or three years ago*, these oxen were almost all bought for slaughter, as the planters fancied the disorder which attacked them to be something belonging to the breed. I only know one pair surviving, and they work admirably well, being as active as Devonshire oxen. I send you a pair of the horns, but unluckily forgot to send a skull till it was too late to obtain one. The beef was very fine-grained, but of a darker colour than usual.

"I have lately seen it remarked that cross-bred animals, though possessing some advantages, are generally inferior in stamina to those of unmixed breed, and more liable to disease; such observations as I have been able to make fully bear out the truth of this position. We have here many Timor ponies, as well as from Java; and their powers of endurance and exemption from disease are far superior to those of Cape or European horses. The Timor are very light but wiry, seldom reaching 13 hands high; they are spirited and active, rather low before, and are very sure. The Java are larger and stouter, many reaching 13 and some 13½ hands; these generally carry the head and tail very high, and are safe and fast. The most valued

* See Annals, vol. xv. p. 141.

of all however are the Burmese, or more correctly the Pegu ponies; these are universally of the cob make, with great carcase, thick necks and short strong legs; they are very easy for the saddle, generally ambling, and are very safe, fast and enduring: their great power renders them excellent for four-wheeled carriages; and it is not uncommon to see one of them 13 hands high draw with ease a carriage that would be a good load for an ordinary horse of 15: their chief defect is their impetuosity, which is excessive. This breed is particularly mindful of ill-treatment, and a person that has once misused one will seldom be able to do anything with him afterwards. They are of various colours, but I never saw a black one: the prevailing colour is gray, most beautifully dappled. They all have that peculiar fulness at the throat which belongs to the horses in ancient Grecian sculpture. Mares or stallions of this breed cannot be procured at any price whatever. A captain with whom I am intimate, a proprietor at Moulmein, assures me of this fact, which I have also heard from many others. No bribe would induce a native to expose himself to the certain torture and death that would follow a violation of this law.

"I am decidedly of opinion that geldings stand work quite as well as entire horses here, and some of those persons most competent to judge concur with me. These Pegu ponies are a striking instance of the fact.

"I do not know if you are aware of the amazing fecundity of the 'Tanree*,' which is very abundant here. They sometimes produce as many as twenty-two young at a birth; and from twelve to eighteen is their usual number. Their appearance is much like that of the hedgehog, and like those animals they hybernate in the dry season. As far as I can learn they are altogether insectivorous. They are far from being of so pacific a nature as the hedgehog, for they bite hard and hold on with great tenacity. The female when followed by her young will turn and face a pursuer with angry gruntings till her little ones are in safety. They are a favourite dish with the lower orders here, and are generally split down the back, after being singed like pigs, and are then smoked. They are usually fat, but the only one I ever tasted had a rank flavour that was by no means agreeable. They are not indigenous here, having been introduced from Madagascar; but they are very numerous, notwithstanding their being destroyed in immense numbers for food."

HABITS OF INSECTS.

Philosophical Hall, Leeds, Dec. 15, 1847.

Dear Sir,—I know not whether the two accompanying scraps will be worth a line in the 'Annals of Natural History.' The first is a case affording an illustration of the powers which the Arachnida possess of sustaining life when deprived of food.

* This must be the *Centetes setosus*, which appears to be the only species introduced into Mauritius.—T. B.